

PROGRAMS AND PLANS--Policy Statement on Stage Accuracy

In Reply Refer To:  
WGS-Mail Stop 415

June 2, 1989

OFFICE OF SURFACE WATER TECHNICAL MDMORANDUM NO. 89.08

SUBJECT: PROGRAMS AND PLANS--Policy Statement on Stage Accuracy

The U.S. Geological Survey (USGS) collects water-level or stage data for many purposes. A common purpose is to obtain a flow characteristic that can be related directly to discharge. Other uses are to determine stage in estuaries, lakes, reservoirs, streams, and ground-water levels.

This memorandum discusses policy as it relates to the measurement of stage for the purpose of determining stream discharge at regular daily discharge gaging stations.

The USGS has traditionally used a stage-accuracy goal of + or - 0.01 foot (ft). In recent years, many stage-sensing devices have been marketed which are incapable of meeting this accuracy objective. Extensive testing and evaluation of a variety of sensor systems has been carried out at the USGS Hydrologic Instrumentation Facility (HIF), and some pressure-based sensing systems have been identified that offer acceptable alternatives to mercury manometers and stilling wells.

Surface Water Branch Technical Memorandum 85.08 acknowledges the difficulty of obtaining high accuracy stage measurements at sites with unstable channels or other problems and allows for relaxing normal accuracy goals for these stations. Additionally, data needs such as reconnaissance, special studies, and similar activities sometimes may be met with less accurate stage observations. In these cases, District management is responsible for determining acceptable accuracy requirements.

The intent of this memorandum is to reaffirm the present stage accuracy goal of + or - 0.01 ft for daily discharge stations and also allow for cases where lower accuracy is appropriate. HIF's efforts to procure new pressure-sensor systems for stage measurement are a step towards achieving this accuracy goal.

Data may be used for purposes not foreseen at the time of collection, and the possibility of other uses should be considered before modifying the general accuracy criteria.

Ernest D. Cobb  
Acting, Chief, Office of Surface  
Water

WRD Distribution: A, B, S, FO, PO

<http://water.usgs.gov/admin/memo/SW/sw89.08.html>